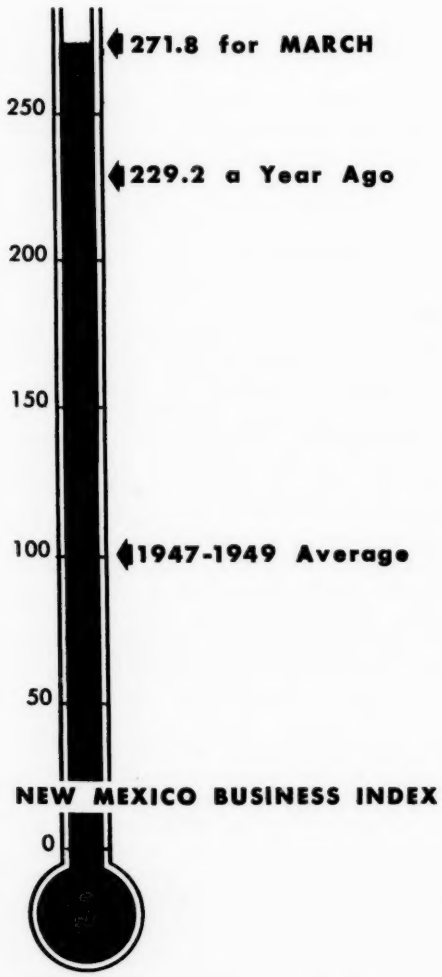
MAY 1958

New Mexico BUSINESS



Unless the customary measures of activity are misleading, New Mexico business during March was enjoying an unprecedented boom, rather than suffering from a recession. All major indexes of activity, except those for mining, showed improvements from year-earlier figures, some of them quite substantial, to bring the over-all Index of Business Activity to 271.8, nearly 19 per cent above a year earlier and an all-time record for the month of March.

Within this framework of unsurpassed boom, the fact that unemployment was 61 per cent larger than in March 1957 appears completely incongruous. Although it marks a condition about which it is difficult to be cheerful, this increased unemployment can hardly be said to be a measure of business recession in the State. Moreover, while it is large by comparison with last year, a level of unemployment only slightly more than 4 per cent of the labor force can hardly be described as alarming.

Mining was the only industry which did not contribute significantly to the rise in the general level of business activity. Metals mining, in particular, continues to languish.

(Continued on Page 11)

"Copper Chronicle"--First of Two Articles on New Mexico Copper

COPPER CHRONICLE:

The Story of New Mexico "Red Gold"

By

Margaret Meaders

("Copper Chronicle" will be presented in two parts. This article is Part I.)

The story of copper in New Mexico is an old, old story. Older than the first American colonial copper production at Simsbury, Conn., in 1709. Older than Onate's autograph on El Morro; older than the coming of Espejo in 1582; older even than the explorations of Coronado in the 1540s. The rich tinkle of copper hawk-bells sounded in the ears of the Southwest's very first white visitors Alvar Nunez Cabeza de Vaca and his companions Andres Dorantes and Alonzo del Castillo Maldonado and their Negro slave, Estevan, wandering overland to Mexico after shipwreck on the Gulf Coast. Some of the irrestible lure of the Seven Cities of Cibola and of Quivira was born in that tinkle.

FIRST ACCOUNT

In 1542 De Vaca wrote in his Relacion an account of an experience which had occurred, as historians see it, near present-day El Paso in the 1530s:

"Among the articles given us (by natives), Dorantes received a hawk-bell of copper, thick and large, figured with a face, which the natives had from others, their neighbors; we asked whence the others had obtained it, and they said it had been brought from northern worlds, where there was much copper."

The next day at a big pueblo on "the banks of a very beautiful river" the bell was shown to other Indians, who told De Vaca "that where it came from were buried many plates of the same material. It was a thing they greatly esteemed, and where it came from, were also fixed inhabitations." Because of these experiences and his account of them, Cabeza de Vaca is credited with being the first white man to recognize that riches lay in wait in what soon came to be called Nuevo Mejico.

EARLY MINING VENTURES

The source of the copper reported by those early Spaniards is usually believed to have been the great--and subsequently famous--mine of Santa Rita del Cobre, which was profitably worked by the Spaniards at least as early as 1804. Prior efforts resulted from the disclosure in 1800 by an Apache to a Spanish colonel of the secret of the mine's location. On the western slope of a mountain on top of which towers a long-loved landmark, the gigantic red-lava figure of a woman kneeling in eternal orisons before a great altar, were concentrated tremendous copper deposits.

The Spaniard, one Jose Carrasco, tried to mine the deposits, but lacked capital for full development and was also bitterly plagued by the Apaches during his limited operations. Soon he approached a wealthy and influential Chihuahua banker and merchant Don Francisco Manuel Elguea, who was able to obtain the famous Santa Rita del Cobre grant of land from the Mexican government, plus a contract to supply copper for coins, since Santa Rita was then the cheapest and nearest source of copper to Mexico City.

"New Mexico Copper Today and Tomorrow" will appear in the June NEW MEXICO BUSINESS.

In 1804 Elguea was given permission by the Apaches to establish Santa Rita on the slope of Kneeling Nun Mountain. He was aided mightily by the manner of his negotiating: he gave not only cloth, guns, and horses to the Indians, but also "strangely shaped casks of ardent spirits," which apparently sealed the agreement. Soon Elguea was building a triangular adobe fort, beginning real mining, and readying the mule trains, which for five years would haul crude copper bars the 400 desert miles to Chihuahua. Sufficient gold came from the ore to finance such extended transportation. Those early diggings were surely among the first underground mines in what is now the continental United States. Perhaps they were the very first.

Nearly 50 years before the important and celebrated copper discoveries in northern Michigan, from which full-scale copper mining in this nation is supposed to have sprung (since only then did production, according to the records, reach "more than a few hundred tons a year"), Zebulon Pike reported in 1807 that New Mexico was sending to Chihuahua, Sonora, and Sinaloa "wrought copper vessels of superior quality." He said that there was a copper mine which yielded 20,000 mule-loads of metal annually, a yearly volume since estimated at four million pounds.

After Elguea's death, the property was abandoned--or at best worked only intermittently. The next white man to mine the Santa Rita del Cobre was the American Sylvester Pattie, a trapper along the San Pedro River, who happened upon the mine entirely by chance. In 1825, with Apaches trailing Pattie and some companion trappers, they were forced to take refuge in the mine tunnel. When the Indians stampeded the white men's mounts and stole their furs and supplies, the marooned Pattie set about exploring and prospecting the tunnel. Pleased with what he found, he leased the property from the Elguea family and put the Santa Rita into profitable operation for the second known time. Robbed two years later of gold sent to purchase the property, Pattie was financially ruined.

Next to come onto the scene spread out below the Kneeling Nun seems to have been a Frenchman named Coursier, who reputedly cleared a million dollars in the seven years he worked the mine and who by 1828 may have briefly owned it. The sequence of events turns a trifle hazy at this point; but apparently the mine was next worked on lease in the mid-1830s by Robert McKnight, among whose employees was a young teamster named Kit Carson. Presumably, an Apache attack the third year of McKnight's operation spelled doom for his mining ambitions. A mule train from Chihuahua was ambushed, and Chief Red Sleeves (Mangas Coloradas) and his warriors blockaded all wagon trails, cutting off incoming supplies and preventing outgoing copper shipments. McKnight was forced to abandon the mine and the country.

From 1840 until the late 1850s, Leonardo Sesquieros successfully operated there, but was finally--like McKnight--forced to give up because of Apache depredations.

It thus appears that copper activity on a fairly large scale occurred in what is now Grant County, often called "the treasure vault of New Mexico," long before the historic copper war of the Eighties between the lake pool producers in Michigan and the freshman companies in the West and the Southwest, who were developing "new" deposits and threatening Michigan's supremacy in the kingdom of red gold.

IN THE TIME OF RECORDS

Essentially, the history of New Mexico copper --under Apache, Spaniard, American--is the history of that same famous mine, the Santa Rita del Cobre, and Grant County. However, at least traces of copper minerals occur in almost every mining district in the State; and 10 other counties have contributed, though not sensationally, to New Mexico's estimated total production through 1957 of 2,109,702 short tons of recoverable copper, valued at an estimated $813,293,000. (See Table I and Map 1.)

Those other 10 counties are Catron, Colfax, Dona Ana, Guadalupe, Hidalgo, Lincoln, Otero, Santa Fe, Sierra, and Socorro. Table II presents statistics on their production as well as on that of

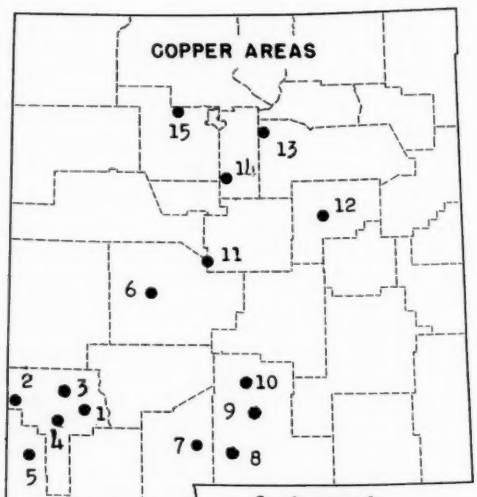
I. VOLUME AND VALUE OF NEW MEX. COPPER PRODUCTION

Through 1957

Year or Period	Volume (short tons)	Value (add 1,000s)
Prior to 1880 (Estimate)	15,000	$ 6,000
1880-1903	24,683	7,217
1904-1930	672,579	234,420
1931-1954	1,191,178	413,616
1955	66,417	49,547
1956	74,345	65,500
1957	65,500	39,300
TOTAL	2,109,702	$815,600

SOURCES: 1880-1954 data from The Metal Resources of New Mexico and Their Economic Features, Eugene Carter Anderson

1954-1957 data from U.S. Bureau of Mines



1. Central
2. Steeple Rock
3. Pinos Altos
4. Burro Mtns.
5. Lordsburg
6. Magdalena
7. Organ
8. Orogrande
9. Sacramento
10. Tularosa
11. Soholle
12. Pastura
13. Willow Creek
14. San Pedro
15. Nacimento Mtns.

Grant. Although far below Grant in contribution, the 10 have produced an estimated 97,930 short tons--more than five times the production of Wyoming, South Dakota, Texas, and Oregon combined. (See Table III.) However, only six of the 10 have yielded as much as 1,000 tons each. Those six are discussed in brief fashion below, much of the information having come from Eugene Carter Anderson's excellent book The Metal Resources of New Mexico and Their Economic Features Through 1954, published in 1957 under the sponsorship of the State Bureau of Mines and Mineral Resources.

Hidalgo

Of our six supplementary copper counties, Hidalgo is much the most productive, having turned out close to 72,357 tons since 1920, its earliest fully recorded copper year, and having produced about 3 per cent of all New Mexico copper of recent years. In Hidalgo the Lordsburg District is paramount--the only other district besides Central (which includes Santa Rita) consistently reported on by the U. S. Bureau of Mines. (See Table IV.) Since 1944 this district has produced 21,489 tons--about 30 per cent of Hidalgo's all-time total.

First opened up as a silver area in 1870, the Lordsburg achieved importance in copper through the operations of the Calumet and Arizona Mining Company at its Eighty-Five mine. In 1930 the Eighty-Five yielded a monthly average of 195 tons of copper. A year later Phelps-Dodge bought it and in 1952 suspended operations. Since then, copper honors have been shared by the Bonney, the Miser's Chest, the Atwood, and the Hope, Faith, and Charity mines, with the Miser's Chest turning out to be the major copper producer in Hidalgo and the Atwood soon taking second place. All these mines are in the Virginia (Shakespeare) subdistrict.

The Miser's Chest Mining and Milling Company, Inc., operated the Miser's Chest mine until 1945. In 1936 the Banner Mining Company leased the Bonney, which for the preceding two years had joined the Miser's Chest and the Hope, Faith, and Charity as Hidalgo's sole producers. Banner put up a 200-ton flotation mill almost at once and in the late summer began turning out concentrates. The mill was enlarged the following year to handle 500 tons per day. In 1941 the Banner outfit leased the old Anita mine some five miles away and put it into operation in '42, trucking the ore to the Bonney mill. In 1945 Banner acquired the Miser's Chest.

The Atwood mine was worked in exploratory fashion late in 1942 by the U. S. Bureau of Mines, which after repairing the old shaft and diggings used a diamond-drilling technique on all Atwood

II. COPPER PRODUCTION IN ELEVEN N. M. COUNTIES

From First Year of Record Through 1957

(short tons)

County	Earliest Year	Volume
Catron[a]	1880	485
Colfax	1904	112
Dona Ana	1904	1,378
Grant[b]	1904	1,965,189
Guadalupe	1925	6,401
Hidalgo[b]	1920	72,357
Lincoln	1905	222
Otero	1904	3,269
Santa Fe	1904	7,622
Sierra	1904	435
Socorro[c]	1904	5,649

[a]Figures available only for Mogollon District. Production for the county included in Socorro figures prior to 1922.

[b]Production from Hidalgo included in Grant figures prior to 1920.

[c]Includes Catron figures prior to 1922.

SOURCE: U.S. Bureau of Mines

claims. This writer was unable to learn when the Atwood was first worked. It was brought again into production in 1943 and soon taken over by C. H. and S. A. McIntosh. The Annual Reports of the Inspector of Mines list 120 Banner employees in 1944, 104 in 1950 at the Miser's Chest and 36 at the Atwood, 94 at the Miser's Chest in 1954 and 14 at the Atwood, and 97 at the Miser's Chest in 1957, with 97 at the Atwood. Those figures are fiscal-year figures. Actually, late 1957 brought shutdowns at almost all copper mines except those at Santa Rita. In 1950, the U. S. Bureau of Mines ranked the Bonney-Miser's Chest mines as 22nd among the nation's 300 copper mines.

Guadalupe

Third in importance in recent years (though falling somewhat under Santa Fe in total long-range production) is Guadalupe, with one outstanding copper producer--the Stauber mine in the county's only metal-mining district the Pastura. The Pastura is 17 miles southwest of Santa Rosa; its copper mineralization is confined to a single bed, which is 18 feet thick at its widest point. The Stauber mine--from which has come 90 per cent of all Pastura copper--was first operated in 1925, was closed in 1930, was put into production again in 1940, was once more closed at the end of World War II, and was again reactivated in 1949. The present copper crisis has brought inaction for the third time. During the first half of this decade approximately 300 tons of ore per day went from the Stauber to the El Paso smelter.

The Inspector's reports show five persons employed at the mine in 1950, 14 in 1953, and 10 in fiscal '57.

Santa Fe

Third in production and fourth in continuity of importance, Santa Fe County has obtained most of its copper from the San Pedro (New Placers) District in the San Pedro Mountains. This district affords no production records to match the antiquity ascribed to it. In The Bonanza Trail, Muriel Sibell Wolle, well-known biographer of western mining camps, says that the district's chief copper mine the San Pedro was mined by the Spaniards in 1832--57 years before Americans reopened it in 1889. By the time that Jose Serafin Ramirez obtained a Mexican grant of more than 31,000 acres in 1845, "the area was full of men," according to Mrs. Wolle. Primarily a gold area, the copper deposits were also valuable. R. E. Twitchell in Leading Facts of New Mexico History quotes the report of Lieut. J. W. Abert, who visited the district in 1846:

"In the evening we visited a town at the base of the principal mountain; here, mingled with houses, were huge mounds of earth, thrown out of the wells so that the village looked like a village of gigantic prairie-dogs. Nearly all the people there were at their wells, and were drawing up bags of loose sand by means of windlasses."

III. U.S. MINE PRODUCTION OF RECOVERABLE COPPER BY STATES

From Earliest Record Through 1957

(short tons)

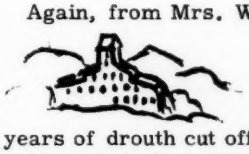
Region & State	Total Production
Alaska	685,910
Arizona	15,737,396
California	634,774
Colorado	288,736
Idaho	147,762
Montana	7,330,778
Nevada	2,453,726
NEW MEXICO	2,095,746[a]
Utah	7,622,520
Washington	121,529
Wyoming	16,335
Missouri[b]	731,079
Michigan	5,181,275
South Dakota, Texas, and Oregon	1,505
Undistributed among other States East of the Mississippi[c]	743,459
TOTAL	43,792,530

[a]Slight discrepancy between this total and that in Table 1 is due to difference in sources.

[b]Small quantity for Wisconsin included with Missouri

[c]Mainly Tennessee; also, North Carolina, Pennsylvania, Vermont, and Virginia

SOURCE: U.S. Bureau of Mines



Again, from Mrs. Wolle: "Both the big copper mine on the hill and the placers on the flat were worked for some time, until several consecutive years of drouth cut off the water supply and litigation shut down the smelter. . . . The San Pedro Copper mine, high on the mountain beyond the town, produced several million pounds of metal between 1889 and 1892, and the Golden 9 (a newspaper), in the first flush of mining hysteria, accurately reflected the exuberance of the reactivated camp in this fashion:

"'July 18--Everybody is coming to San Pedro and the rest of the world will be used as pasturage.'"

Despite its feverish past, the San Pedro has been worked only spasmodically in recent years. Between 1899 and 1918 a smelter was available nearby. During World War I a copper shortage resulted in renewed mining there; during the late 1920s the Santa Fe Gold & Copper Company worked the property. Records are fragmentary, but in the mid-1930s ore was shipped to the El Paso smelter; and in 1938 the John J. Raskob interests bought the mine, expanded operations there, and built a flotation mill the next year--one with a capacity of 150 tons per day. The Raskob people ran the mill until August of 1951. Some time later the old San Pedro was bought by Col. C. F. Williams, of Santa Fe. In the early 1950s new copper explorations were sparked by a government loan from the Defense Minerals Administration. Total recorded Santa Fe copper yield is estimated at 7,622 tons. In 1949 only three persons were employed at the San Pedro: in 1955, there were five; in 1957, seven.

Socorro, Otero, Dona Ana

Socorro County's copper deposits are widespread, occurring in at least 12 districts; but almost all copper has come from the Magdalena District on the western slope of the northern Magdalena Mountains. Chiefly famous as a lead-zinc region, the Magdalena has also yielded 5,586 of the county's 5,649 tons of copper.

Otero's copper deposits are concentrated in three districts--Orogrande (Jarilla), Tularosa, and Sacramento; but most of the ore mined so far has come from the Jarilla Hills in the Orogrande District in southwestern Otero. Total yield for the county: 3,269 tons.

Almost all the metal production of Dona Ana has originated in the Organ District, an area including the northern Organ Mountains and the southern tip of the San Andres Mountains. Although mining has been conducted in the region since 1849, the two most important copper mines have been the Torpedo, discovered in 1899, and the Memphis, first worked in 1882. Total Dona Ana copper output has reached 1,378 tons.

GRANT COUNTY, N. M. COPPER CAPITAL

As estimated by Mr. Anderson, New Mexico has produced metals worth slightly more than $1 billion. Over $800 million of that output came from Grant County--sufficient proof of Grant's metal supremacy, at least through the present time. However, uranium counties are now pushing the copper kingdom hard, and the tide could turn.

New Mexico's copper yield through 1954 has been valued at $661.3 million; and of the State's estimated total copper tonnage of around 2.1 million tons, Grant County has accounted for at least 1,965,189 tons.

Among copper mines, the old Santa Rita del Cobre still has no challenger. Central District (now including Santa Rita, Bayard, and Hanover subdistricts) has supplied--on an average--about 7 per cent of all U.S. copper mined since 1944 (see Table V). Most of the remainder of Grant copper has come from the Pinos Altos, Steeple Rock, and Burro Mountains Districts (see Map 2).

BURRO MOUNTAINS

Important district milestones in Burro Mountains history are these: copper was discovered in

IV. MINE PRODUCTION OF RECOVERABLE COPPER

By the Two Chief N. M. Districts

1944 - 1955

(short tons)

District	1944-48 average	1949	1950	1951	1952	1953	1954	1955	1956
Central (including Santa Rita)	[a]59,876	[a]53,276	63,694	71,526	74,008	69,869	58,178	64,084	71,216
Lordsburg	1,636	1,934	2,061	1,521	1,475	1,988	2,210	b	2,120
U.S. Total	807,311	752,750	909,343	928,330	925,359	926,448	835,472	998,570	1,106,215

[a]Includes average for Burro Mountain for 1945-1946 and 1948 to avoid disclosing individual company operations.

[b]Figures withheld to avoid disclosing individual company operations.

SOURCE: U.S. Bureau of Mines

V. PRODUCTION OF RECOVERABLE COPPER BY U.S. AND BY CENTRAL DISTRICT, N. MEX.,[a] AND PERCENTAGE OF U.S. TOTAL COMING FROM CENTRAL

1944 - 1956

(short tons)

	1944-48 Average	1949	1950	1951	1952	1953	1954	1955	1956
U.S. Total	807,311	752,750	909,343	928,330	925,359	926,448	835,472	998,570	1,106,215
Central Total	59,876	53,276	63,694	71,526	74,008	69,869	58,178	64,084	71,216
Percentage of U.S. Total Coming from Central	7.4	7.1	7.0	7.7	8.0	7.5	7.0	6.4	6.4

[a]Including Santa Rita

SOURCE: U.S. Bureau of Mines

1871; new discoveries were made in 1902; the Phelps-Dodge interests purchased the holdings of the Burro Mountain Copper Company in 1905; the same interests obtained properties of the Chemung Copper Company at Tyrone in 1912; the period of maximum importance was that occurring between 1912 and 1918; the Burro Mountains mine was shut down in 1921; small-scale leaching operations of mine dumps were carried on from 1921 to 1929; the Burro Mountains mine was reactivated in 1941; and extensive core-drilling and plans for open-pit operations were prominent during the 1950-57 period.

The Phelps-Dodge concentrating mill erected in 1912 had a capacity of 2,000 tons per day. Burro Mountains District turned out 8,500 tons of copper in 1918, its best year. Between 1941 and 1950, 15,000 tons came from that one mine.

STEEPLE ROCK

This district's chronology includes the discovery of ore in 1880, operation of the Carlisle mine from 1880-1897, intermittent operations from 1897 to 1920, no mining at all during the 1920-1932 period, and a second important era dating from 1932 through 1947.

Steeple Rock lies near the Arizona line in western Grant. During the first important mining era, the Carlisle mine dominated the scene, producing approximately $3-million's worth of copper.

The second important period of productivity was dominated by the East Camp Exploration Syndicate (later, the Exploration Syndicate, Inc.). During the final year of this second flourishing period, 16.9 tons of copper were mined. Until 1940 Exploration shipped its ores, mined at the East Camp group, out of the state for treating, but in 1940-42 the ore was treated locally in a cyanide mill. The old Carlisle group was also operated by this same syndicate for three years during the 1940s, with the ores being milled in a selective flotation mill in Arizona until the cyanide mill was converted to flotation in 1944. Between 1933 and 1947 the company mined approximately 400 tons of copper, in addition to 17,000 ounces of gold, a million ounces of silver, 1,500 tons of lead, and 1,500 tons of zinc.

Between 1936 and 1942 the Carlisle group was worked first by Veta Mines, Inc., and other lessees, and then by the Southwest Minerals Company.

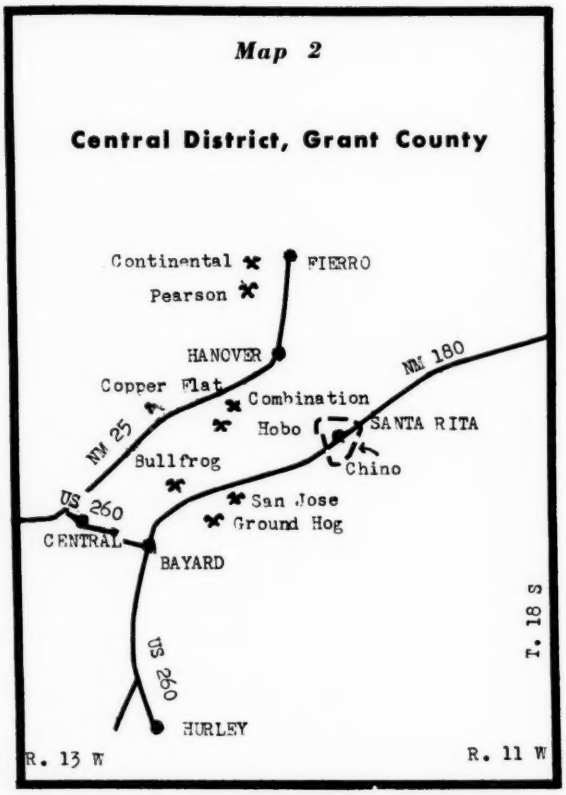
PINOS ALTOS

The district's most important copper period occurred between 1904 and 1929. Some activity continued through 1940, but from that time on copper has been strictly a by-product in the mining of zinc.

The Pinos Altos is in the mountains of the same name about eight miles from Silver City. Between 1904 and 1929 some 967 tons of copper were mined there. Between 1932 and 1950 the copper yield was around 211 tons. Since 1947, copper output has been negligible.

Central District

If Grant is "the treasure vault of New Mexico," then Central is the most important compartment in the vault. Situated in the eastern part of the county, this district has produced metals valued at more than the total yield of all other districts in the state combined. Referred to in New Mexico as Central Area, the region is considered a district by the U.S. Bureau of Mines, and includes those of Bayard, Santa Rita, and Hanover.



Bayard

Activities in this portion of south Central (see Map 2) have been largely those of the American Smelting and Refining Company and the United States Smelting Refining and Mining Company. The New Mexico Ore Processing Company also operated in the area during World War II.

Among American Smelting's mines the San Jose is the oldest, having been successfully mined for gold, silver, and copper even before 1869. It became ASARCO property in 1928. The same company's Ground Hog mine nearby was mined spasmodically prior to 1914, but fairly successfully from then until 1928 when it was taken over by American Smelting. From then through 1947 ASARCO operated the San Jose and the Ground Hog as a single unit to produce silver, lead, copper, and zinc. The mine is now known principally as a lead-zinc producer and was shut down last year because of the extremely soft lead-zinc market.

Among U.S. Smelting's operations the Bullfrog mine is the most important, but has produced only minor amounts of copper.

Hanover

In the northern part of Central lies the Hanover area, which includes two other areas often considered separate entities--Fierro and Copper Flat. Mr. Anderson states that "copper ores are said to have been mined (in Hanover) on a fairly large scale about the middle of the 19th century and possibly earlier," but that "they have been of minor importance in recent times."

Mr. Anderson also says, "The Copper Flat subdistrict first was prospected for copper about 1900. According to a local resident, the Calumet and Arizona Company sank most of the shafts at that time."

Between 1923 and 1938 the Black Hawk Consolidated Mines Company treated in its flotation mill enough copper ore, largely from the Ground Hog-San Jose but also from its own Combination-Hobo mines, to produce something like 12,500 tons of concentrates.

In 1919 control of the property of the Hanover-Bessemer Iron and Copper Company, an early operator in the area, passed into the hands of U. S. Smelting. After the early days of World War II, this company produced ore containing gold, silver, copper, lead, and zinc, chiefly in the Pearson and the Continental mines. In 1946 the Combination-Hobo claims were also acquired by U.S. Smelting and made part of the Bullfrog operations.

Santa Rita

And so, back to the Kneeling Nun, to the copper hawk-bells, and to ancient Santa Rita del Cobre--first, biggest, most long-lasting of them all. Back in the 1840s a scholarly St. Louis physician-botanist exploring the Southwest reported that he'd been told that Santa Rita ore was "inexhaustible." Time has so far borne out the truthfulness of the good doctor's informant.

Numerous writers have estimated that, including the four million pounds believed to have gone each year by mule team to Chihuahua during the days of Don Francisco Manuel Elguea, copper production at Santa Rita prior to 1904 was around 80 million pounds. However, B.S. Butler in his 1912 Mineral Resources of the United States said that "from 1845 to 1912 New Mexico has a recorded output of 124,353,963 pounds of copper. . . . The principal production has been from the districts in Grant County."

The first American to obtain positive title to the property was M.D. Hayes, a Colorado pioneer, who in 1872-73 traced Elguea heirs in Europe and Mexico and completed a deal with them in 1873.

In 1880 J. Parker Whitney, of Boston, purchased the Santa Rita. In 1889 Whitney sold it to the Santa Rita Copper Company (in which the principal stockholders included H. H. Rogers and W. D. Rockefeller) for $250,000.

During the 1904-1909 period, production at Santa Rita averaged 1,750 tons a year. From 1911 to 1934 output totaled around 507,500 tons. In 1909 the Chino Copper Company came on the scene and three years later began large-scale steam-shovel operations, which led to the open-pit operations famous there today. In 1924 the Ray Consolidated Copper Company of Arizona bought the property; in 1926 Ray was absorbed into the Nevada Consolidated Copper Company; in 1933 the mines passed--along with all the assets of Nevada Consolidated--into the hands of the Kennecott Copper Corporation. Since then, the Santa Rita operations have been known as the Chino Division of Kennecott, now including a concentrating mill, a smelter, and a fire refinery at nearby Hurley. After nearly 400 years, the copper deposits in "northern worlds" became associated with the copper outfit (biggest on earth) the name of which was to become almost synonymous with New Mexico copper.

Although Kennecott's chief U. S. source of copper is its Bingham, Utah, district, Chino contributes appreciably to Kennecott's rank as the world's Number One copper producer. In 1950 Kennecott's mine production in short tons was 418,000--about 46 per cent of all U. S. copper mined that year. In 1950 Central was seventh among the 12 top U. S. mining districts which hold 95 per cent of all U. S. reserves and was fourth--along with Arizona's Ajo District--among copper-producing districts. In 1950 Chino stood fourth among the 300 active copper-producing mines in the nation. By 1956 Chino was fifth among mines, and Central was fifth among districts. Chino was outranked in '56 only by Kennecott's Utah Copper, Phelps-Dodge's Morenci in Arizona, the Anaconda Company's Butte group in Montana, and Phelps-Dodge's New Cornelia in Arizona.

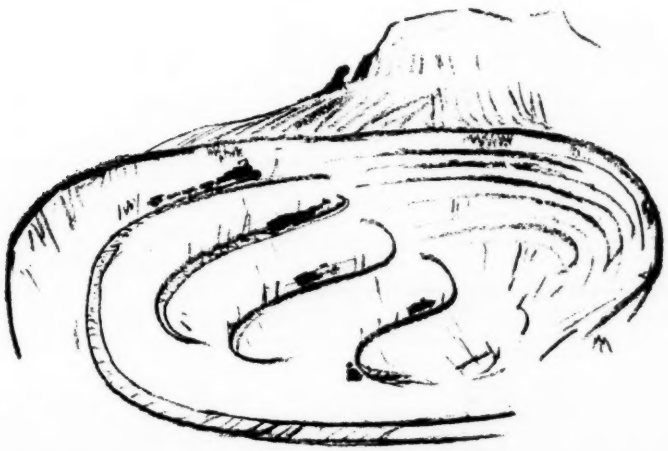
The U. S. Bureau of Mines' Materials Survey: Copper describes the Chino mines in this fashion:

"Chino is a compact, open-pit deposit with an appreciable content of molybdenite. Highly successful leaching of copper from the waste-dump rock is a notable feature of the chalcocite mineralization. Open-pit operations are limited toward the south and east because of adverse waste-stripping ratios. Total production has been about 1,400,000 tons of copper metal (1952). Annual production is around 60,000 tons."

The Hurley smelter had an annual short-ton capacity in 1953 of 72,000. By 1955, expansion had raised the capacity to 84,000.

In 1944, Chino employees, as listed by the State Inspector of Mines, totaled 1,756. In 1950 there were 1,933. In 1957, 2,383. However, since last June Kennecott has twice had to curtail production, with layoffs resulting.

The story of copper in New Mexico has indeed been a long one. In next month's NEW MEXICO BUSINESS, "New Mexico Copper Today and Tomorrow" will consider the present situation in the industry and will then attempt a spot of crystal-gazing.



Business Activity in New Mexico

	March 1958	Year Earlier March 1957	Per Cent Change March 1958 from Feb. 1958	Per Cent Change March 1958 from Mar. 1957	INDEX March 1958 (Average Month 1947-49 = 100)
Index of Business Activity (1947-49 = 100)	271.8	229.2	+ 4.4	+ 18.6	271.8
*Sales of Retail Stores (1,000's)	$102,887	$100,739	+ 0.6	+ 2.1	209.1[c]
Apparel Stores	2,690	2,370	+ 15.9	+ 13.5	135.8
Automotive Dealers	28,967	28,526	+ 7.0	+ 1.5	216.8
Subsistence Stores	19,938	19,859	- 3.3	+ 0.4	172.9
Furniture and Appliance Stores	3,623	4,513	+ 3.1	- 19.7	142.4
Building Materials Dealers	8,474	7,319	+ 9.0	+ 15.8	173.9
Other Retail Stores	39,195	38,152	- 4.3	+ 2.7	267.8[c]
*Sales of Amusement Establishments (1,000's)	$ 1,128	$ 1,018	+ 0.3	+ 10.8	126.6
*Sales of Service Establishments (1,000's)	15,224	9,714	+ 17.1	+ 56.7	393.8
*Sales of Contractors (1,000's)	27,059	24,019	- 9.1	+ 12.7	396.0
*Sales of Wholesalers (1,000's)	29,882	28,929	+ 1.5	+ 3.3	147.9
*Public Utilities' and Carriers' Sales (1,000's)	16,703	12,340	+ 8.2	+ 35.4	357.0
*Manufacturers' and Processors' Sales: see note on back cover.					
*Life Insurance Sales (1,000's)	18,814	17,772	- 4.6	+ 5.9	536.5
*Bank Debits, 36 banks (1,000's)	$409,159	$367,009	+ 9.2	+ 11.5	251.7[a]
Bank Loans and Discounts, 36 banks (1,000's)	40,185	35,342	+ 7.3	+ 13.7	234.5[a]
Demand Deposits, 36 banks (1,000's)	303,746	298,302	+ 0.7	+ 1.8	160.4[a]
Time Deposits, 36 banks (1,000's)	101,061	93,042	+ 1.6	+ 8.6	282.0[a]
Business Failure Liabilities (1,000's)[b]	40	415	+ 14.9	- 90.2	141.5
Wage Workers in Nonagricultural Establishments	209,800	201,300	- 0.1	+ 4.2	159.3
in Manufacturing	21,600	20,200	+ 0.5	+ 6.9	217.8
in Mining	15,300	17,100	- 3.8	- 10.5	132.8
in Transportation and Utilities	19,300	19,600	- 2.0	- 1.5	128.6
in Trade	46,400	44,000	+ 0.7	+ 5.5	156.2
in Finance, Insurance and Real Estate	8,100	6,900	+ 1.2	+ 17.4	276.0
in Services and Miscellaneous	26,300	24,500	+ 0.4	+ 7.3	122.5
in Government	55,200	52,900	+ 0.2	+ 4.3	193.5
in Contract Construction	17,600	16,100	+ 0.6	+ 9.3	139.3
Number of Insured Unemployed	7,604	4,729	+ 3.8	+ 60.8	--
Rate of Unemployment (per cent of labor force)	4.12	2.88	- 3.1	+ 43.1	265.2
*Building Permits, total 15 cities (1,000's)	$ 10,785	$ 6,349	+ 66.2	+ 69.9	449.4[a]
Residential	4,563	3,234	- 14.0	+ 41.1	307.6[a]
Nonresidential	5,550	2,414	+715.6	+129.9	851.2[a]
Other	672	701	+ 33.6	- 4.1	253.7[a]
*Petroleum Production (1,000's of bbls)	7,600	8,309	+ 3.8	- 8.5	200.4
Natural Gas Production (millions of cu ft)	70,995	62,580	+ 9.8	+ 13.4	441.4
*Electric Power Production (1,000's of kwh's)	228,158	202,045	+ 13.0	+ 12.9	258.6
*Index of Total Metallics Production (1947-49 = 100)	80.1	108.8	+ 2.9	- 26.4	80.1
Mine Production - Copper (1,000's of lbs)	10,300	11,604	+ 1.8	- 11.2	97.4
Mine Production - Lead (1,000's of lbs)	480	1,240	+ 5.7	- 61.3	46.2
Mine Production - Zinc (1,000's of lbs)	3,700	6,838	+ 2.5	- 45.9	57.9
*Mine Production - Potash (1,000's of tons)	1,099	1,149	+ 12.4	- 4.3	274.5
Index of All Farm Prices (1947-49 = 100)	105.5	90.7	+ 4.5	+ 16.3	105.5
Index of Livestock Prices	115.1	90.9	+ 4.0	+ 26.6	115.1
Index of Crop Prices	88.9	96.8	+ 6.7	- 8.2	88.9
Receipts from All Farm Marketings (1,000's)	$ 11,475	$ 9,885	+ 14.3	+ 16.4	74.4
Livestock and Products	9,143	7,210	+ 14.4	+ 26.8	99.0
Crops	2,332	2,645	+ 13.9	- 11.8	37.7

	April 1958	Year Earlier April 1957	Per Cent Change April 1958 from Mar. 1958	Per Cent Change April 1958 from Apr. 1957	INDEX April 1958 (Average Month 1947-49 = 100)
Bank Debits, 36 banks (1,000's)	$410,733	$381,319	+ 0.4	+ 7.7	252.7[a]
Bank Loans and Discounts, 36 banks (1,000's)	42,876	36,492	+ 6.7	+ 17.5	250.2[a]
Demand Deposits, 36 banks (1,000's)	306,235	296,812	+ 0.8	+ 3.2	161.7[a]
Time Deposits, 36 banks (1,000's)	105,157	93,532	+ 4.1	+ 12.4	293.6[a]
Wage Workers in Nonagricultural Establishments	212,800	204,800	+ 1.4	+ 3.9	161.6
Number of Insured Unemployed	7,299	4,017	- 4.0	+ 81.7	--
Rate of Unemployment (per cent of labor force)	4.19	2.43	+ 1.7	+ 72.4	269.3
Building Permits, total 15 cities (1,000's)	$ 5,508	$ 4,157	- 48.9	+ 32.5	299.5[a]
Residential	3,880	2,464	- 15.0	+ 57.5	261.6[a]
Nonresidential	1,016	1,048	- 81.7	- 3.0	155.8[a]
Other	612	645	- 8.9	- 5.1	231.2[a]
Index of All Farm Prices (1947-49 = 100)	107.2	93.4	+ 1.6	+ 14.8	107.2
Index of Livestock Prices	117.4	95.0	+ 2.0	+ 23.6	117.4
Index of Crop Prices	89.3	96.8	+ 0.4	- 7.7	89.3

*Indexes for these items are used to compute the Index of Business Activity.

[a]Although the number of reporting units changes, the indexes for these items are comparable with indexes for preceding months.

[b]The figures in this series are based on the average of three months' data.

[c]Preliminary

Sources:

Retail Sales data: N. M. Bureau of Revenue
Potash Production: N. M. Bureau of Revenue
Petroleum and Natural Gas Production: N. M. Oil Conservation Commission
Life Insurance Sales (New Ordinary): Life Insurance Agency Management Association
Wage Workers and Unemployment: N. M. Employment Security Commission and U. S. Dept. of Labor
Electric Power Production: Federal Power Commission
Metallics Production: U. S. Bureau of Mines
Farm Prices and Marketings: U. S. Agricultural Marketing Service
Bank data (all series), Building Permits: Bureau of Business Research
Business Failure Liabilities: Dun & Bradstreet, Inc.

Monthly Summary (Continued from Page 1)

Mine production of potash was also down somewhat from a year earlier. Petroleum production, too, was down, but was maintaining a surprisingly high level in the face of continued low well allowables.

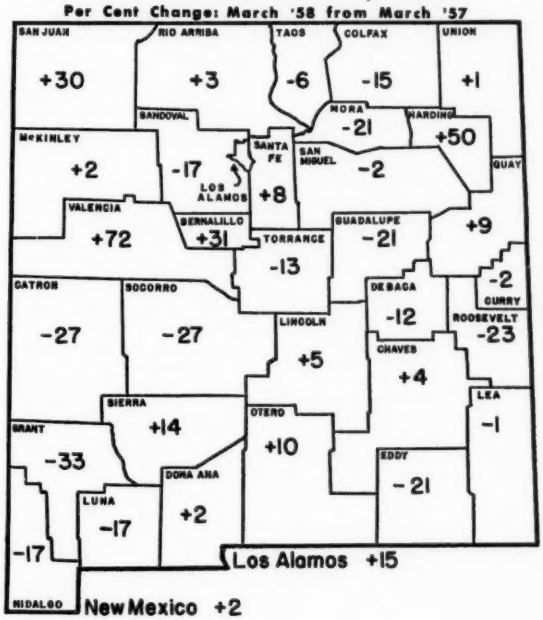
Construction continued to surge ahead in New Mexico during March with sales up 13 per cent and employment up better than 9 per cent. With building permits up 70 per cent in March and 33 per cent in April, the outlook for construction activity remains good.

Manufacturing also showed definite signs of continued growth with a 7 per cent gain in employment over a year earlier. (Comparative data on sales of manufacturers are no longer available.) Sales of public utilities and common carriers were reported up 35 per cent over a year earlier, and electric power production also showed a good gain.

Most other segments of the State's economy registered gains from modest to substantial. Retailers showed small sales increases in which even the automobile dealers (but not the appliance dealers) shared. Sales by amusement establishments were up well over the year before, and service establishments had a whopping 57 per cent increase.

RETAIL SALES: A Comparison

Per Cent Change: March '58 from March '57



Sales Activity in New Mexico Counties

March 1958

(add 1,000's)	Retail Stores							Others		
County	Apparel	Automotive	Subsistence	Furniture & Appliances	Building Material	Other	Total	Amusement Places	Service Firms	Wholesalers' Sales*
Bernalillo	$1,142	$ 8,937	$ 5,426	$1,425	$3,813	$ 8,959	$ 29,702	$ 274	$ 3,930	$13,542
Catron	0	49	29	1	(a)	36	115	4	2	26
Chaves	200	1,720	1,010	139	763	1,577	5,500	135	789	1,262
Colfax	24	369	259	10	68	378	1,108	22	105	165
Curry	136	812	707	114	203	1,014	2,986	55	455	701
De Baca	(a)	51	59	3	14	100	227	(a)	15	24
Dona Ana	101	1,476	1,078	213	346	946	4,160	68	574	777
Eddy	161	1,298	1,208	318	309	1,738	5,032	62	694	967
Grant	39	254	436	30	71	451	1,281	15	174	313
Guadalupe	0	214	167	1	29	145	556	(a)	7	76
Harding	0	61	5	0	2	67	135	1	1	19
Hidalgo	4	235	141	1	40	127	548	3	22	112
Lea	197	2,840	1,093	242	238	3,533	8,143	74	3,897	1,598
Lincoln	23	192	126	3	58	217	619	10	31	46
Los Alamos	20	154	255	3	8	198	638	25	87	9
Luna	13	406	335	43	39	258	1,094	12	81	311
McKinley	65	718	665	102	163	984	2,697	42	202	1,058
Mora	0	22	15	(a)	0	64	101	(a)	5	24
Otero	69	884	855	114	296	993	3,211	40	273	294
Quay	27	596	338	34	61	331	1,387	23	83	331
Rio Arriba	(a)	502	228	19	64	287	1,100	1	41	57
Roosevelt	25	409	313	89	140	281	1,257	23	185	384
Sandoval	(a)	167	46	0	2	146	361	(a)	11	18
San Juan	127	2,480	1,273	161	845	2,427	7,313	91	553	1,287
San Miguel	16	434	351	31	57	404	1,293	10	102	347
Santa Fe	169	1,166	1,219	293	341	1,190	4,378	63	731	1,033
Sierra	2	234	237	16	26	136	651	9	74	34
Socorro	8	205	194	14	17	149	587	(a)	41	86
Taos	9	188	182	48	14	157	598	9	45	96
Torrance	(a)	239	136	0	6	125	506	(a)	13	30
Union	9	245	139	16	30	127	566	8	46	34
Valencia	23	973	706	54	174	1,350	3,280	13	140	168
Unallocated	81	437	616	86	237	10,300(b)	11,757(b)	36	1,813	3,649
Total	$2,690	$28,967	$19,938	$3,623	$8,474	$39,195(b)	$102,857(b)	$1,128	$15,224	$29,882

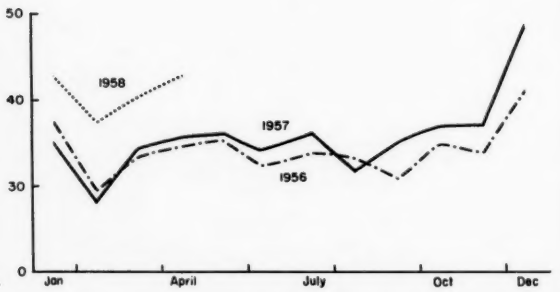
* This is a new series. "Manufacturers' and Processors' Sales" have been dropped. See note on back cover.
(a) Less than $1,000
(b) Preliminary
Source: School Tax Division, N. M. Bureau of Revenue

CHART-OF-THE-MONTH

New Mexico bank loans

continue to climb in 1958

and continue to surpass 1957.



NOTE: The Bureau is discontinuing the publication of the statistical series on sales by manufacturers and processors because the figures currently reported by the School Tax Division are no longer comparable with those reported in previous years. The reason for the lack of comparability is that the 1957 Legislature passed a law exempting from the School Tax (sales tax) all manufacturers and processors except those producing a few natural-resources products. The Bureau continued to publish the gross receipts figures reported for the group, since the law provided for the continuing collection by the School Tax Division of reports of gross receipts from all such businesses, though not subject to tax. However, the Bureau has learned that the School Tax Division is not receiving such reports; consequently, the figures reported for manufacturers' and processors' sales since July 1957 have understated such sales by an unknown but substantial amount.

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